



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/633,598

08/05/2003

Nicholas Jordan

1509-438

3784

22879

7590

05/09/2005

HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER

NGUYEN, CHAU N

ART UNIT

PAPER NUMBER

2831

DATE MAILED: 05/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

N.A

Office Action Summary	Application No.	Applicant(s)	
	10/633,598	JORDAN ET AL.	
	Examiner	Art Unit	
	Chau N. Nguyen	2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16 is/are allowed.
- 6) ☒ Claim(s) 1-15 and 17-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-15 and 17-29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification, as originally filed, does not provide support for the claimed subject matter of "the current return conductor being arranged to contact the current return conductor contact over a substantial fraction of the width of the current return conductor" as now recited in the claimed invention. Applicant, in the remarks filed on March 2, 2005, states that such feature or the feature of "the substantial width excess 50%" is clearly indicated in the drawings. This argument is not found persuasive. Figures 3-9 of the present invention show no indication that the return conductor contact would contact over a substantial fraction of the width of the return conductor. Moreover, page 19, lines 19-21 of the specification discloses that "the ground plane connector 426 typically extends over substantially all of the width of the ground plane 404.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-7, 9-15 and 17-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP6-111634 (JP'634) in view of Dahlgren et al. (3,007,131) and Yang (6,174,195).

JP'634 discloses a flexible electrical connector (Figure 1b) comprising first (13) and second (14) pluralities of spaced apart, elongate, signal carriers, an elongate current return conductor (12), and an insulator (12b), the first and second signal carriers being spaced apart from the return conductor by the insulator and extending substantially parallel to the return conductor, the second signal carriers being spaced from an opposite side of the return conductor to the first signal carriers by a further insulator.

JP'634 does not disclose respective exposed end regions of said first and second pluralities of signal carriers and said current return conductor comprising respective, integrally

Art Unit: 2831

formed contact regions thereof, the first and second pluralities of signal carriers being arranged to be coupled electrically to corresponding contacts of the complementary electrical connector receiver, the contact region of the current return conductor being arranged to be coupled electrically to a corresponding contact of the complementary electrical connector receiver over a substantially fraction of the width of the current return conductor.

Dahlgren et al. discloses a flexible electrical connector comprising respective exposed end regions (Figs 2 and 4) of first (15) and second (13) conductors and intermediate conductor (14) comprising respective, integrally formed contact regions thereof. It would have been obvious to one skilled in the art to apply the teaching of Dahlgren et al. in the connector of JP'634 to provide an electrical connection between the respective conductors to a connector receiver.

Yang discloses an electrical connector receiver (Figure 9) comprising a housing, first and second pluralities of signal contacts (43), and a current return conductor contact (31): each of said first and second pluralities of signal contacts being arranged to engage contact regions of first and second pluralities of signal carriers, each of said first plurality of signal contacts being configured so as to allow said connector to pass thereover so as to enable the current return conductor to contact said current return conductor contact over a substantial fraction of the width of the current return conductor (the return conductor contact 31 of Yang being a grounding plate with a row of grounding terminals 32, col. 3, lines 47-50). It would have been obvious to one skilled in the art to use the connector receiver taught by Yang with the modified flexible connector (a ribbon cable) of JP'634 to establish electrical connection with the ribbon cable.

The modified connector of JP'634 also discloses one of the first and second signal carriers and return conductor extending longitudinally of the other and beyond a terminal end of the other so that en portions of the first and second signal carriers and return conductor being staggered in position longitudinally along the connector (re claim 3), the second signal carriers (see Dahlgren et al., #13) extending longitudinally of the connector beyond a terminal end of the first signal carriers (see Dahlgren et al., #15) (re claim 4), said second plurality of signal carriers extending longitudinally of said connector beyond a terminal and of said current return conductor (re claim 5), said second plurality of signal carriers extending longitudinally of said connector beyond a terminal end of said current return conductor (see Dahlgren et al., #14) (re claim 6), said current return conductor is at least as wide as a total width spanned by a wider one of the following: said first plurality of signal carriers, said second plurality of signal carriers (re claim 7), said connector has a positive location formation disposed at one of the following: an edge of the connector, a side portion of the connector (re claim 9), the current return conductor is one of the following: a sheet of conducting material, a mesh of a conducting material (re claim 10). Re claims 2 and 21, it would have been obvious to one skilled in the art to use thin film tracks or metal tracks as the material for the first and second signal carriers of JP'634 since thin film tracks or metal tracks are known in the art for being used as signal carrying materials. Re claims 24-29, Yang discloses the return conductor contact 31 being a grounding plate with a row of grounding terminals 32. Accordingly, the return conductor contact 31 of Yang has a substantial width to contact the return conductor of the ribbon cable. Yang does not specifically disclose the return conductor contact contacting over more than 50% the width of the return conductor. However, it would have been obvious to one skilled in the art to choose a suitable

width of the return conductor contact (of Yang) in the modified connection of JP'634 to contact more than 50% the width of the return conductor since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP'634 in view of Dahlgren et al. and Yang as applied to claim 1 above, and further in view of Argyrakis et al. (5,373,109).

Claim 8 additionally recites a terminal end of said second plurality of signal carriers being located at substantially the same longitudinal location as a terminal end of one of the following: said first plurality of signal carriers, said current return conductor. Argyrakis et al. discloses a flexible connector comprising second signal carriers (12) having a terminal end being located at substantially the same longitudinal location as a terminal end of a current return conductor (22). It would have been obvious that depending on the configuration of the receiver, one skilled in the art would modify the second signal carriers of JP'634 to have terminal end as taught by Argyrakis et al. to provide a compatible connection between the cable and the connector.

Allowable Subject Matter

7. Claim 16 is allowed.

Response to Arguments

8. Applicant's arguments with respect to claims 1, 11, 18 and 21-23 have been considered but are moot in view of the new ground(s) of rejection except for the following.

Applicant argues that JP'634 discloses a flexible wiring sheet (not a connector), and Dahlgren does not disclose a second, middle, conducting layer that is a ground plane or a current return conductor. This argument is not found persuasive. The fact that the flexible wiring sheet of JP'634 comprises signal carriers and ground plane, form of an electrical cable, it is a connector since a flexible cable can be used for electrically connecting between electronic devices.

Dahlgren is relied upon only to support the position of terminating the ends of conductors in a layered cable, therefore Dahlgren does not have to disclose the middle conductor being a ground plane or a current return conductor.

In response to applicant's argument that the Office Action ignores the requirement of independent claims 11 and 21-23 for contact over a substantial width of the ground plane or return path, this feature is not being ignored. It is taught in Yang. Specifically, Yang teaches the return conductor contact 31 being a grounding plate with a row of grounding terminals 32 and electrically contacting the cable. In other words, the whole plate 31 with terminals 32 electrically contacts the cable. Accordingly, the contact 31 would contact a substantial fraction of the width of the ground plane or the return path.

Summary

Art Unit: 2831

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau N. Nguyen whose telephone number is 571-272-1980. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2831

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Chau N Nguyen", with a long horizontal flourish extending to the right.

Chau N Nguyen
Primary Examiner
Art Unit 2831